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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,264	07/19/2000	Aruna B. Kumar	60237	1298

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DIGIMARC CORPORATION  
19801 SW 72ND AVENUE  
SUITE 100  
TUALATIN, OR 97062

EXAMINER

MILLER, MARTIN E

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/619,264

Applicant(s)

KUMAR

Examiner

Martin Miller

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 8-19-2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Request for Continued Examination (RCE)***

1. This office action acknowledges the filing of a RCE dated August 19, 2002.

Accordingly, the amendment filed with the RCE transmittal has been entered into the record. An action on its merits follows.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-3, 7, 13, 15-20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Lubawy et al., (hereinafter Lubawy), US 6353479.

As per claim 1, Lubawy teaches:

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a paper medium (photo media, col. 1, ll. 39-41, print media, col. 1, ll. 63) carrying a steganographic (invisible to the naked eye, col. 2, ll. 1-2) message, the message including paper control information (color mapping col. 1, ll. 37-53) related to the paper medium that is readable by a machine (machine readable information (barcode), col. 1, ll. 65-66, col. 4, ll. 55-63) from an image captured of at least a portion of the paper medium (margin, col. 2, ll. 3-6), and that is operable to control (col. 7, ll. 1-16) a printer so as to optimize print quality for physical characteristics (col. 1, ll. 63-66) of the paper medium

As claim 2, Lubawy teaches:

wherein the printer control information (barcode, col. 4, ll. ) includes one or more identifiers that are used to look up(col. 2, ll. 32-33, figure 2) printer control information used to optimize printer operation for the paper medium (col. 2, l. 66-col. 3, 6).

As per claim 3, Lubawy teaches:

wherein printer control information (data matrix) includes characteristics information of the paper medium (normal, , col. 3, l. 63, , photo, col. 4, l. 10, transparency, col. 4, l. 21).

As per claim 10, Lubawy teaches:

wherein the printer control unit uses the printer control information used to control the operation of the printer (col. 3, l. 60-col. 3, l. 28).

As per claim 11, Lubawy teaches:

including a computer connected to a printer; wherein the decoder comprises program code executing on the computer (figure 1, col. 3, ll. 38-45).

As per claims 17 and 20, Lubawy teaches:

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wherein the non-thermal physical characteristic comprises at least one of absorption (col. 1, ll. 27-30, comparing transparencies to plain paper), paper dimension, bleeding coefficient and reflectivity (glossiness, col. 1, ll. 40-45).

As per claim 18, Lubawy teaches:

wherein the non-thermal printer comprises an ink-jet printer (col. 3, ll. 39-41).

As per claim 19, these claims recite the same control parameters as claim 13 above and analogous remarks apply.

Claims 7, 13, 15, and 16 recite substantially the same limitations as claim 1 above and analogous remarks apply. However, claims 13, 15 and 16 each add an additional limitation not found in either of claims 1 and 7.

As per claim 13, it recites that the printer control information is specifically for an "ink-jet printer [col. 3, ll. 40-41], including adapting at least one of volume of ink drops, number of ink drops [col. 1, ll. 46-50], and placement of ink drops". Brackets ([ ]) indicate where such limitations are taught in Lubawy.

As per claims 15 and 16, they recite a limitation that the physical characteristic must be "at least one non-thermal physical characteristic of the paper medium", which Lubawy teaches as "normal", col. 3, ll. 63-67, "photo", col. 4, ll. 10-17, and "transparency", col. 4, ll. 21-27.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 4-6, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubawy as applied to claims 1, 7, 13, 15, and 16, further in view of Rhoads, US 6442285 B2.

As per claim 4, Lubawy does teach that his barcode mark must be "invisible to the naked eye"(col. 4, ll. 40-45), but Lubawy does not specifically teach that his steganographic mark is a watermark, however, Rhoads teaches:

wherein the steganographic message is encoded in a digital watermark (col. 28, ll. 50-61).

It would have been obvious to one of ordinary skill in the art to use the digital watermarks as taught by Rhoads for marking items as substitutes for the invisible ink barcodes of Lubawy because Rhoads admits that watermarks can be readily substituted for barcodes and that watermarking typically does not leave any human-apparent evidence of data representation without reducing functionality. Additionally, Lubawy admits there are many ways of invisibly encoding media (col. 2, ll. 8-9) and Lubawy merely requires that the printer be equipped with a reader that is capable of detecting invisible code (col. 2, ll. 10-12).

As per claim 5, Lubawy teaches embedded an identifier code on the paper medium using invisible ink (col. 1, l. 66-col. 2, l. 5). However Rhoads teaches the use of digital watermarks (col. 28, ll. 50-60).

As per claim 6, Rhoads teaches:

a digital watermark (col. 28, ll. 50-58). Lubawy teaches that the information is repeated throughout at least a portion (margin) of the paper medium (figure 1, col. 6, ll. 4-6).

As per claim 12, Rhoads teaches:

wherein the decoder comprises a watermark decoder (col. 2, ll. 2-3).

As per claim 14, it recites substantially the same limitations as claim 12 above and analogous remarks apply.

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8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubawy as applied to claim 7, further in view of Kim et al. (hereinafter Kim), US 6276771 B1.

As per claim 8, Lubawy does not specifically teach that his ink jet printer is part of a multifunctional device. However, Kim teaches that inkjet printer features can easily be incorporated in a multifunctional device design. Kim teaches:

wherein the image sensor is part of a scanning subsystem in a multifunction device having a printing subsystem (printer module, abstract) and a scanning subsystem (scanner module, abstract) (col. 1, ll. 45-55).

It would have been obvious to one of ordinary skill in the art to utilize the features of Lubawy in the multifunction office equipment of Kim to eliminate errors and minimize wasting print media and toner that result from manually selecting the wrong print mode. Incorporation of Lubawy's system into Kim's provides consumers who desire multifunction devices to benefit from Lubawy's invention.

As per claim 9, Kim teaches:

wherein the image sensor comprises a CCD Array (col. 3, l. 49).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following U.S. patent(s) refer(s) to detecting marks on paper to control a printer: Walker, 6325505, Smith, 6047110, Lindstrom et al., 6079807, Liang, 6373965, Berson, 5861618, Huston, 5816165, and Haga, 5629512. The following U.S. patent(s) refer(s) to identifying documents based on scanned watermarks: Katoh et al., 6289125.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Miller whose telephone number is (703) 306-9134. The examiner can normally be reached on Monday-Friday, Maxi-flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

mem

September 10, 2002



JOSEPH MANCUSO  
PRIMARY EXAMINER